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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,472	06/27/2000	William R. Van Etten	65545-0074	5091

7590 07/27/2005

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EXAMINER

HAQ, NAEEM U

ART UNIT	PAPER NUMBER
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3625

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/604,472

Applicant(s)

VAN ET TEN ET AL.

Examiner

Naeem Haq

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-19 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 18, 19, 21-25, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This action is in response to the Applicants' amendment and Affidavits filed under 37 C.F.R. 1.132 on April 27, 2005. Claim 20 has been cancelled and new claims 26-28 have been added. Claims 17-19 and 21-28 are pending and will be considered for examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-19 and 21-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 17-19 and 21-28 are directed to a procurement "system". This system comprises three components: (1) a first catalog database, (2) a second catalog database, and (3) an item selection "procedure".

A "database" is not necessarily a physical structure (c.f., a data "storage medium", such as a hard drive). A "database" in its generally accepted meaning in the computer arts is considered a "file composed of records" (see MS Press Computer Dictionary). In its reasonably broad sense, claim 17 recites that the "system" is comprised of two catalog FILES and a selection PROCEDURE.

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A "procedure" is an abstract entity. A procedure, in its reasonably broad sense, is a collection of steps to be followed. In its most specific sense, it could be construed as "computer procedure" (i.e., a collection of computer instructions). Either way, there is nothing physical recited in claim 17. In its most reasonable sense, claim 17 recites two files of non-functional descriptive material and a selection "procedure" (whether taken as a set of logical steps or as a set of computer instructions). None of these components recite anything physical to constitute a "system" (i.e. an apparatus). Therefore, claims 17-19 and 21-28 are deemed to be non-statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-19 and 21-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 17-19 and 21-28 are directed to a procurement "system". However, as noted above in the 101 analysis, Applicants' invention consists of two files of non-functional descriptive material and a selection "procedure". It is unclear to the Examiner how these elements constitute a "system".

Claims 17-19 and 21-28 recite the terms "class relationships", "attribute relationships", "value relationships", and "leaf class". The Affidavit filed under 37 C.F.R. 1.132 by Thomas McAlees states that the present invention is directed to a relational

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database and not to an object-oriented database. Based on this Affidavit, it is unclear to the Examiner what the terms "class relationships", "attribute relationships", "value relationships", and "leaf class" mean. The Examiner notes that a relational database stores information in tables consisting of rows (records) and columns (fields) (see US Patent 5,701,461 col. 1, lines 12-21). Nothing in the claim language suggests to one of ordinary skill in the art that the claimed databases store data in tables having rows and columns. Instead, the Applicants have chosen to use terminology which is well known in the field of object-oriented programming to describe their database. The Examiner further notes that an Applicant can be his or her own lexicographer. However, where Applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the Applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). In the present case, the Applicants' specification does not specifically or clearly define the terms "class relationships", "attribute relationships", "value relationships", and "leaf class" so that one of ordinary skill in the art could be put on notice that these terms are contrary to their ordinary meaning. For this reason, claims 17-19 and 21-28 are rendered indefinite.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 17, 18, 22, 24, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US Patent 6,014,644) in view of <http://www.research.ibm.com/journal/sj/361/srinivasan.html> "Object persistence in object-oriented applications" hereinafter referred to as IBM.

Referring to claims 17 and 18, Erickson teaches a procurement system for a buyer to purchase a desired item said system comprising: a first catalog database accessible to said buyer (column 8, lines 28-30; Figure 1, item "18") and a second catalog database (column 8, lines 28-30; Figure 1, item "16"). Erickson does not teach that the first database lacks the desired item. However, Erickson teaches that the buyer may search the first or second database to identify suppliers that offer goods of interest to the buyer (column 8, lines 28-30, lines 51-67; column 12, line 58 – column 13, line 1). Furthermore, the first and second databases do not contain the same data because the buyers and suppliers are allowed to add data into the databases independently of each other (column 3, lines 13-42; column 7, line 46 – column 8, line 27). Finally, Erickson teaches that mechanisms are needed to keep the first and second databases synchronized (column 11, lines 51-56; column 12, lines 30-35). Therefore, the feature of the first database lacking a desired item is obvious in view of Erickson. One of ordinary skill in the art would realize since Erickson places no restriction on when buyers and suppliers are allowed to add data into the databases that these databases

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will be out of sync at some point (i.e. there will be data in one database that does not exist in the other database). Thus, Erickson repeatedly stresses the need to keep the databases synchronized. However, Erickson teaches the databases are synchronized on a periodic basis or manually (column 12, lines 9-12; column 17, lines 51-55).

Therefore one of ordinary skill in the art would recognize that there are times when the databases are out of sync. Erickson further teaches that a buyer can update the database (column 17, lines 57-65) or the buyer can search a second database for the desired item (column 12, lines 58-64). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have the buyer in the invention of Erickson search the second database for a desired item when the item was not found the first database. One of ordinary skill in the art would have been motivated to do so in order to ensure that the buyer had access to the most current data. Erickson does not teach that each unique item stored within the first and second catalog databases is identified with respect to class, attribute, and value relationships.

However, IBM teaches an object-oriented database model that allows data to be captured and stored in a database using object-oriented principles (page 2, paragraph 2; page 3, paragraph 4; page 4, paragraphs 3 and 4). Furthermore, IBM teaches that object-oriented database management systems (OODBMS) use class, attribute, and value relationships to store and identify items with a database (page 6, "Table 1"; pages 7 and 8, "Complex objects"; page 12, "Encapsulation"; page 13, "Inheritance"; Figures 3 and 4). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of IBM into the system of

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Erickson. One of ordinary skill in the art would have been motivated to do so in order to avoid the impedance mismatch that exists with relation data models and databases, as taught by IBM (page 4, paragraph 4 – page 5, paragraph 2). Erickson does not teach an item selection procedure that relies on said relationships to search for the desired item within the second database when it is not located within the first database.

However, IBM teaches that object-oriented databases have an Object Query Language (OQL) that allows for searching a database (page 4, paragraph 1). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate OQL of IBM into the system of Erickson. One of ordinary skill in the art would have been motivated to do so in order to efficiently search an object-oriented database. Likewise, searching the second database when an item is not located within the first database would also have been obvious to one of ordinary skill in the art at the time of invention because Erickson teaches that a buyer can search both the first and second databases. One of ordinary skill in the art would have been motivated to do so in order to ensure that the buyer had access to the most current data.

Referring to claims 27 and 28, Erickson teaches a special requisition identifying the desired item (column 13, lines 30-38; column 14, line 56 – column 15, line 11).

Erickson does not teach that the requisition uses said class, attribute, and value relationships. However, IBM teaches that object-oriented databases have an Object Query Language (OQL) that allows for searching a database (page 4, paragraph 1). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate OQL of IBM into the system of Erickson. One of

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ordinary skill in the art would have been motivated to do so in order to efficiently search an object-oriented database. Erickson also teaches a master database (Figure 1, items "16", "20") including the desired item, said special requisition being used to search for the desired item in the master database (column 13, lines 30-38; column 14, line 56 – column 15, line 11). Erickson also teaches forwarding the special requisition to a supplier who provides the desired item (column 13, lines 30-38; column 14, line 56 – column 15, line 11; column 15, lines 30-35). Erickson does not teach that the databases are not updated according to said class, attribute, and value relationships. However, Erickson places no restriction on when the buyers and suppliers can add data into the databases. Therefore, the decision not to update a database would have been obvious to one of ordinary skill in the art, at the time the invention was made.

Applicants have not disclosed that not updating a database provides an advantage, is used for a particular purpose or solves a stated problem. Furthermore, one of ordinary skill in the art would have expected Applicants' invention to perform equally well with the teachings of Erickson and IBM because the decision to update or not update a database does not affect the system of the prior art in any way. Therefore, it would have been obvious to one of ordinary skill in this art to modify the prior art to obtain the invention as specified in the claims.

Referring to claim 22, Erickson does not teach that the class relationships are hierarchical among classes. However, IBM teaches that object-oriented databases use principles of object-oriented programming such as inheritance which provides for a hierarchy among classes (page 13, paragraphs 2 and 3). Therefore it would have been

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obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of IBM into the system of Erickson. One of ordinary skill in the art would have been motivated to do so in order to efficiently search and maintain an object-oriented database.

Referring to claim 24, Erickson and IBM do not teach that the attributes comprise static, differentiating, and dynamic. However, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate these features into the cited prior art. Applicant has not disclosed that static, differentiating, and dynamic attributes provide an advantage, are used for a particular purpose or solve a stated problem. Furthermore, one of ordinary skill in the art would have expected Applicants' invention to perform equally well with the teachings of the cited prior art because any item has data associated with it which describes the item uniquely. Therefore, it would have been obvious to one of ordinary skill in this art to modify the cited prior art to obtain the invention as specified in the claims.

Claim 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US Patent 6,014,644) in view of <http://www.research.ibm.com/journal/sj/361/srinivasan.html> "Object persistence in object-oriented applications" hereinafter referred to as IBM and further in view of Official Notice.

Referring to claim 21, the cited prior art does not teach that a parametric search engine performs the item selection procedure (i.e. database query). However, Official Notice is taken that it is old and well known in the art to use a parametric search engine

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to search a database. Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate a search engine into the system of Erickson and IBM. One of ordinary skill in the art would have been motivated to do so in order to provide a user with a user-friendly interface for searching a database.

Referring to claims 23 and 25, the cited prior art does not teach that a leaf class is the lowest class in the hierarchy, or that a value relationship is between an attribute to a value relationship. However, Official Notice is taken that is old and well known in the art of object-oriented databases. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate these features into the system of Erickson and IBM. One of ordinary skill in the art would have been motivated to do so in order to exploit the full potential of object-oriented databases.

Response to Arguments

The Applicants and Mr. Friel have argued that the Erickson reference teaches a different invention because buyers search for a supplier and not for a desired item. The Examiner respectfully disagrees. Erickson teaches that buyers search for a desired item (column 2, line 66 – column 3, line 7; column 12, lines 58-65). The Applicants have also argued that current application is directed to sourcing a desire item. The Examiner respectfully disagrees. Claim 17 recites two databases and a selection procedure. There is nothing in claim 17 that would suggest to one of ordinary skill in the

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art that the invention is directed to "sourcing" an item. The Applicants and Mr. Friel have also argued that Erickson does not teach relationships among classifications. First, the Examiner would point out that the terms "class relationships", "attribute relationships", "value relationships", and "leaf class" are indefinite because the Affidavit of Mr. McAlees states that the present invention is directed to a relational database and not to an object-oriented database. As noted above in the 112, second paragraph rejection, a relational database stores data in a table having rows and columns. The terms "class relationships", "attribute relationships", "value relationships", and "leaf class" have no meaning in the context of a relational database. If the Applicants disagree with this analysis then the Examiner requests the Applicants to provide evidence of a relational database that stores data using "class relationships", "attribute relationships", "value relationships", and a "leaf class". Second, the Examiner disagrees with the argument that Erickson does not teach relationships among classifications. Erickson teaches that the buyers, suppliers, products, and services are grouped by classifications and/or products or product lines (column 3, lines 1-3, lines 19-22; column 9, lines 38-49). This arrangement inherently creates a "relationship" because products are grouped classification or product lines. The Applicants, Mr. Friel, and Mr. McAlees have also argued that there is no motivation to combine Erickson with IBM because there is no impedance mismatch in Erickson. This argument is not persuasive. First, as admitted by the Applicants, Erickson does not describe any kind of database data model. Furthermore, Erickson does not describe any kind of data model used in the application. Erickson is completely silent on the architecture of the database and

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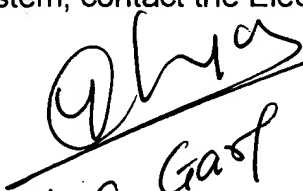
application. Therefore, one of ordinary skill in the art would recognize that an impedance mismatch is well within the scope of Erickson's invention since Erickson places no restriction on the type of database or application used in his invention. Erickson's disclosure does not preclude an impedance mismatch because the specification provides no guidance that would lead one of ordinary skill in the art to such a conclusion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naeem Haq whose telephone number is (571)-272-6758. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wynn W. Coggins can be reached on (571)-272-7159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. C. Gast
Primary Examiner

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Naeem Haq, Patent Examiner
Art Unit 3625

July 14, 2005


Y. C. Gao
Primary Examiner